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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,468	12/22/2005	Oliver Fahnle	1248.001	2190
23598	7590	05/10/2006		
BOYLE FREDRICKSON NEWHOLM STEIN & GRATZ, S.C. 250 E. WISCONSIN AVENUE SUITE 1030 MILWAUKEE, WI 53202			EXAMINER SCRUGGS, ROBERT J	
			ART UNIT 3723	PAPER NUMBER

DATE MAILED: 05/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/527,468

Applicant(s)

FAHNLE, OLIVER

Examiner

Robert Scruggs

Art Unit

3723

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-33 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-33 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 December 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☒ Certified copies of the priority documents have been received in Application No. GE 10113599.8.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. This office action is in response to a preliminary amendment received March 10, 2005 in which the applicant has cancelled claims 1-14 and added new claims 15-33, therefore, only claims 15-33 will be fully examined.

Priority

2. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. GE10113599.8, filed on March 20, 2001.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the circular cross-section of the outlet and the cylindrical outer contour must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering

Art Unit: 3723

of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 21, 22, 30 and 31 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The applicant discloses in claims 21 and 30, "a region of the outlet is of an order of magnitude of one half of an aperture of an optical component" and in claims 22 and 31 the applicant discloses, "an outer diameter of the tool is of an order of magnitude of a smallest radius of the surface." The "order of magnitude" mentioned in each of the claims provides no specific length or structure and it is unclear to the examiner as to what the dimensions or structural limitations of the regions include.

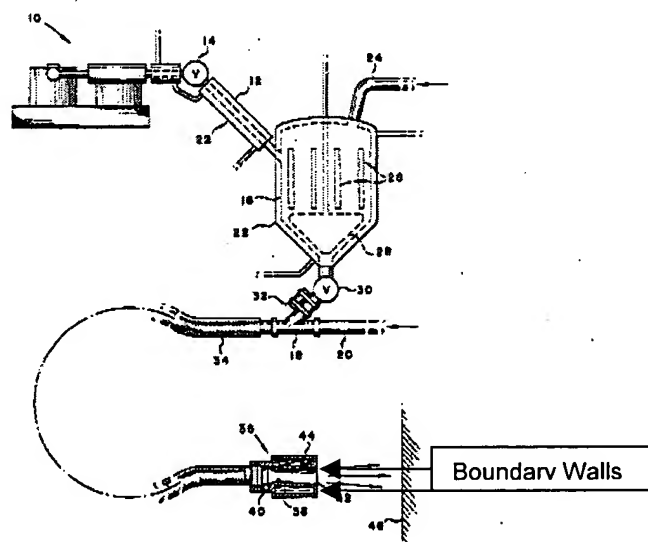
Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 15, 19-22, 24, 28, 29-31 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Fong (4038786). Fong discloses a device for abrasive machining of surfaces of components comprising, a tool (Figure 1) (36) having a cylindrical outer contour (44) an inlet (40) having a cross-sectional area smaller than that of an outlet (42) having a circular cross-section, a supply unit (16) supplying a liquid under a pressure of less than 5 bar (Column 7, Lines 3-5) and said liquid containing abrasive agents dissolved into said inlet and which emerges from said outlet, and positioning means formed as a users hand used for guiding said tool across a workpiece (46) and simultaneously positions said tool in such a manner that said outlet faces the workpiece such that an annular gap defined by boundary walls (See Figure Below) of said outlet and the workpiece is smaller than a cross-sectional area of said inlet (Note, the user controls the distance of the tool with respect to the workpiece, therefore, any distance can be obtained including a distance where an annular gap is smaller than a cross-sectional area of the inlet).



8. Regarding claims 21, 22, 30 and 31 as best understood Fong (4038786) inherently discloses a tool having an outer diameter of one half an aperture of an optical component and having a magnitude of a smallest radius of a curved surface depending on the size of the optical component or curved surface selected.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 16, 17, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fong (4038786) in view of Hashish et al. (5700181). Fong discloses the claimed invention previously mentioned above, but lacks, having the height of an annular gap being about 1-mm and wherein the cross-sectional area of the inlet is greater by a factor of at least 5 than the cross-sectional area of the formed annular gap. However, Hashish et al. discloses an abrasive-liquid polisher where an annular gap (Figure 1) is formed between a nozzle (14) and a workpiece (16), wherein the height of said annular gap is about 1-mm (Column 3, Line 62-Column 4, Line 9), it is the examiner's opinion that if the height of the annular gap is formed by a length of about 1-mm than the cross-sectional area of the inlet would obviously be greater by a factor of 5. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the height of the annular gap of Fong, with an annular gap having a

Art Unit: 3723

height of about 1-mm, in view of Hashish et al. in order to prevent internal stress or other damage formed on the surface of the workpiece during a polishing or grinding process.

11. Claims 18 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fong (4038786) in view of Mitsuhashi et al. (6093088). Fong discloses the claimed invention previously mentioned above, but lacks, a rotary unit for rotating a workpiece during the abrading process. However, Mitsuhashi et al. discloses a rotary unit (Figure 2) (4) for rotating a workpiece (10) during an abrading process. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the tool of Fong, with a rotary unit which supports a workpiece, in view of Mitsuhashi et al. in order to increase the support stability of the workpiece during a polishing or grinding process.

12. Claims 23 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fong (4038786) in view of Zeng (6244927). Fong discloses the claimed invention previously mentioned above, but lacks, positioning means formed as a control unit used for controlling the positioning of the tool according to the surface data of a workpiece. However, Zeng discloses a multi-functional sensing apparatus including positioning means formed as a control unit (30) used for controlling the positioning of the tool according to the surface data of a workpiece (16) (Column 2, Lines 47-54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the positioning means of Fong, with positioning means formed as a control

unit, in view of Zeng, in order to more effectively and accurately control the position of the tool in a polishing or grinding process.

Conclusion

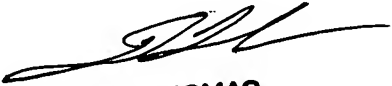
13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Petit et al. (6425804) disclose a pressurized delivery system for abrasive particulate material where the pressure that is used is less than 5 bar.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Scruggs whose telephone number is 571-272-8682. The examiner can normally be reached on Monday-Friday, 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Hail can be reached on 571-272-4485. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RS


DAVID B. THOMAS
PRIMARY EXAMINER